

What is claimed is:

1. A medical device, comprising:
an elongate body; and
a retaining segment extending along a length of the body, forming a fixed portion of an outer surface of the body and including a plurality of projections extending from the portion of the outer surface;
wherein the plurality of projections are adapted to interfere with a wall of a generally tubular vessel to retain the body within the vessel.
2. The device of claim 1, wherein the body includes a distal end and the length is positioned in proximity to the distal end.
3. The device of claim 1, wherein the body includes a proximal end and the length is positioned in proximity to the proximal end.
4. The device of claim 1, wherein the retaining segment extends about an entire circumference of the lead body.
5. The device of claim 1, wherein the retaining segment extends about a portion of a circumference of the body.
6. The device of claim 1, wherein the body includes an outer sheath and the retaining segment is an integral part of the outer sheath.
7. The device of claim 1, wherein the retaining segment is formed on a collar positioned about the body.
8. The device of claim 1, wherein the projections extend laterally at an angle.

9. The device of claim 8, wherein the angle is less than approximately 45 degrees.

10. The device of claim 1, wherein the plurality of projections lie approximately parallel with the portion of the outer surface when the length is approximately straight and protrude laterally from the portion of the outer surface when the length is bent.

11. The device of claim 1, wherein the plurality of projections lie approximately parallel with the portion of the outer surface during insertion of the body into the vessel and protrude laterally from the portion of the outer surface when the body is retracted within the vessel.

12. The device of claim 1, further comprising a dissolvable coating temporarily covering the plurality of projections.

13. The device of claim 1, further comprising a thin walled tube-covering deployable over the plurality of projections.

14. The device of claim 1, wherein the body includes at least one preformed curve in proximity to the retention segment.

15. The device of claim 14, wherein the at least one preformed curve includes a first curve positioned proximal to the retaining segment and a second curve positioned distal to the retaining segment.

16. The device of claim 14, wherein the at least one preformed curve includes a curve positioned proximal to the retaining segment.

17. The device of claim 14, wherein the at least one preformed curve includes a curve positioned distal to the retaining segment.

18. The device of claim 14, wherein the one or more preformed curves include a curve positioned along the length of the body over which the retaining segment extends.

19. The device of claim 1, wherein each of the plurality projections have a length greater than approximately 100 microns.

20. The device of claim 19, wherein the projection length is between approximately 100 microns and approximately 1 mm.

21. The device of claim 19, wherein the projection length is greater than approximately 1 mm.

22. The device of claim 1, wherein the length of the body over which the retaining segment extends is greater than or equal to approximately 1 mm.

23. The device of claim 22, wherein the length is greater than approximately 5 mm.

24. The device of claim 1, wherein a plasma deposition process forms the plurality of projections.

25. The device of claim 1, wherein a molding process forms the plurality of projections.

26. The device of claim 1, wherein an extrusion process forms the plurality of projections.

27. The device of claim 1, wherein a cutting process forms the plurality of projections.
28. The device of claim 1, wherein a laser ablation process forms the plurality of projections.
29. The device of claim 1, wherein the projections are embedded in the retaining segment.
30. The device of claim 1, wherein the projections are included in a coating adhered to the retaining segment.
31. The device of claim 6, wherein the sheath is formed of a material comprising silicone.
32. The device of claim 6, wherein the sheath is formed of a material comprising polyurethane.
33. The device of claim 7, wherein the collar is formed from a bioadsorbable material.
34. The device of claim 7, wherein the collar is formed of a material comprising silicone.
35. The device of claim 7, wherein the collar is formed of a material comprising polyurethane.
36. The device of claim 1, wherein the plurality of projections are fish scale-like.

- 37. The device of claim 1, wherein the plurality of projections are hair-like.
- 38. The device of claim 37, wherein the hair-like projections comprise a bioadsorbable polymer.
- 39. The device of claim 37, wherein the hair-like projections comprise a material promoting thrombotic adhesion with the vessel wall.
- 40. The device of claim 39, wherein the hair-like projections further comprise a dissolvable non-thrombogenic coating.
- 41. The device of claim 1, wherein the plurality of projections are barb-like.
- 42. The device of claim 1, wherein the plurality of projections are tread-like.
- 43. The device of claim 1, wherein the retaining segment further includes a proximal end and each of the plurality of projections includes a terminal edge directed toward the proximal end of the retaining segment.
- 44. The device of claim 43, further comprising a dissolvable coating temporarily covering the plurality of projections.
- 45. The device of claim 43, further comprising a thin walled tube-covering deployable over the plurality of projections.
- 46. The device of claim 43, wherein the body includes at least one preformed curve in proximity to the retention segment.

47. The device of claim 46, wherein the at least one preformed curve includes a first curve positioned proximal to the retaining segment and a second curve positioned distal to the retaining segment.

48. The device of claim 46, wherein the at least one preformed curve includes a curve positioned proximal to the retaining segment.

49. The device of claim 46, wherein the at least one preformed curve includes a curve positioned distal to the retaining segment.

50. The device of claim 46, wherein the one or more preformed curves include a curve positioned along the length of the body over which the retaining segment extends.

51. The device of claim 1, wherein one or more of the plurality of projections include micro-features enhancing engagement of the one or more projections with the vessel wall.

52. A medical device, comprising:

an elongate body including a proximal end, a distal end, an outer surface extending from the proximal end to the distal end; and

means for retention formed in the outer surface and along a length of the outer surface, the retention means allowing insertion or forward motion of the body within a generally tubular vessel and preventing retraction or rearward motion of the lead body once implanted within the vessel.

53. The device of claim 52, wherein the retention means extends about an entire circumference of the outer surface.

54. The device of claim 52, wherein the retention means extends about a portion of a circumference of the outer surface.

55. The device of claim 52, wherein the length along which the retention means is formed is greater than approximately 1 mm.

56. The device of claim 55, wherein the length is greater than approximately 5 mm.

57. The device of claim 52, further comprising a dissolvable coating temporarily covering the means for retention.

58. The device of claim 52, wherein the body includes at least one preformed curve in proximity to the means for retention.

59. The device of claim 58, wherein the one or more preformed curves include a curve formed in the length where the means for retention is formed.

60. The device of claim 59, wherein the means for retention is disabled when the curve is straightened.